

REMARKS

Favorable reconsideration of the application is respectfully requested in light of the amendments and remarks herein.

Upon entry of this amendment, claims 1–17 will be pending. By this amendment, claims 18 and 19 have been canceled; and claims 1, 2, 8, 14, and 17 have been amended. No new matter has been added.

Objection to Claim 8

In Section 3 of the Office Action, Claim 8 stands objected to because the grammar error “a network administrators.” The claim has been amended to remove this language, thereby obviating the objection. Therefore, it is respectfully requested that the objection to claim 8 be withdrawn.

§ 101 Rejection of Claims 17 and 19

In Section 4 of the Office Action, claims 17 and 19 stand rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Claim 17 has been amended to include the subject matter of claim 18. Since the subject matter of claim 18 was not subject to the rejection in Section 4 of the Office Action, claim 17 as amended herein should therefore also not be subject to the rejection. Claim 19 has been canceled.

Accordingly, it is submitted that the rejection of claims 17 and 19 based upon 35 U.S.C. §101 has been obviated and withdrawal thereof is respectfully requested.

§112 Rejection of Claims 1, 4, 6–8 and 14

In Section 5 of the Office Action, claims 1, 4, 6–8 and 14 stand rejected under 35 U.S.C. § 112, second paragraph.

In the Background of the Specification, it was indicated, “In a computer network, each station, node or terminal will have its own tasks to perform. It is also the case that, in use, there will wide fluctuations in usage across the stations. Because of this, various schemes have been developed to increase the performance of a station by utilising spare capacity in other stations of the network that may otherwise lie idle. The present invention relates to one such scheme.”

Background of the Specification, page 2, lines 9–13.

Addressing the above-described need to utilize spare capacity of other stations of a network, apparatuses and methods are provided by embodiments of the present invention for a network station that can request spare capacity of other network stations, and provide spare capacity when requested by another station. For example, the station for a network apparatus of claim 1, as presented herein, includes at least:

A station for a network apparatus, said network apparatus comprising said station and a plurality of other stations, all interconnected in a network by a communication link, said station comprising:

a network connection;

a broadcast unit operable to transmit service requests to said network connection and via said network, said service requests being directed to said each other station identified in said trust list and constituting a request to said each other station to perform a task for said station; and

an answer unit operable to receive service requests via said network through said network connection and, in response

thereto, to transmit via said network through said network connection an acceptance or refusal message in respect of said service request, said acceptance or refusal being decided based on said current status of said station, as determined by said self assessment module.

(emphasis added)

Accordingly, in one aspect of claim 1, a station for a network apparatus includes at least a network connection; a broadcast unit operable to transmit service requests to the network connection and via the network, the service requests being directed to other stations identified in a trust list and the service requests constituting a request to those other stations to perform a task for the station; and an answer unit operable to receive service requests via the network through the network connection and, in response thereto, to transmit via the network through the network connection an acceptance or refusal message in respect of the service request, the acceptance or refusal being decided based on the current status of the station, as determined by a self assessment module. Further, the Specification states that “[t]he broadcast/answer module 12 ... broadcast[s] service requirements to the network. The requirement can be anything related to the task it is performing.” *Specification, page 4, lines 28–30.* (emphasis added) In other words, in the course of performing a task, a first station may transmit service requests constituting requests to other stations to perform tasks, and those requests may be for anything related to the task being performed by the first station.

In Sections 5(a)(i) and (ii), referring to claims 1 and 14, respectively, service requests are essentially interpreted as being differentiated between requests to import or export software modules, and requests for the execution of tasks. As discussed above, a service request may include anything related to the task being performed. Thus, importing or exporting a software

module per a service request, and executing tasks per a service request, are simply tasks requested in the same way by one station or other stations on a network. It is therefore submitted that differentiating service requests does not apply to the manner in which service requests are used by embodiments of the present invention.

In Section 5(a)(iii) of the Office Action, misunderstanding is expressed as to whether “receive service requests” refers to “transmit service requests.” It was further suggested that if they are the same, then a word such as “said” or “the” must be used. As discussed above, claim 1 provides for a broadcast unit operable to transmit service requests via the network and an answer unit operable to receive service requests via the network. In other words, the station can transmit service requests and it can receive service requests. However, an antecedent basis using the suggested words “said” or “the” to reference received service requests to transmitted service requests would imply that a station is receiving the service requests which it has sent, and so would be incorrect.

In Section 5(a)(v), a lack of clarity was suggested as to the meaning of the phrases “from said network” and “to said network.” Claim 1 has been amended for further clarification, and provides that service requests are transmitted and received via said network.

Section 5(a)(vi) refers to claims 6 and 7, and states that it is unclear how the tasks of importing and exporting software modules relate to executing tasks on behalf of another network station. Referring to the discussion above with respect to Sections 5(a)(i) and (ii), importing or exporting a software module, and executing a task, are simply tasks requested in the same way by using a service request. Differentiating the tasks of importing and exporting software modules per a service request, from executing tasks on behalf of another network station, also per a service request, is therefore arbitrary, and inapplicable to embodiments of the present

invention.

Based on the foregoing discussion regarding claims 1, 6–7 and 14, it is submitted that the rejection of claims 1, 6–7 and 14 based upon 35 U.S.C. §112, second paragraph, has been overcome by the present remarks. Further, since claims 4 and 8 depend from claim 1, it is submitted that the rejection of claims 4 and 8 has also been overcome. Withdrawal of the rejection of claims 1, 4, 6–8 and 14 based upon 35 U.S.C. §112, second paragraph, is therefore respectfully requested.

§103 Rejection of Claims 1–4, 6–7 and 9–19

In Section 6 of the Office Action, claims 1–4, 6–7 and 9–19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hild *et al.* (U.S. Patent No. 6,532,368; hereinafter referred to as “Hild”) in view of Segarra *et al.* (U.S. Patent 4,466,063; hereinafter referred to as “Segarra”).

As stated in the Specification, a station includes an “answering unit 46 [which] includes information about the station's self-assessment of its performance if it takes on [a] task and some basic station-based information such as CPU power, benchmark, free memory, total memory, current load of the machine, etc. Before answering any service requirements, security has to be checked to keep intruders away. Also, it has to check resources inside itself to make sure it can take on the task. *Specification, page 5, lines 5–10.* (emphasis added)

In particular, “[t]he self assessment module 14 provides … self assessment based on static status and self assessment based on dynamic status.¹” *Specification, page 5, lines 14–16.* (emphasis added) “The dynamic status information … includes:

- (a) CPU load (current, last 1 minute, last 5 minutes, last 15 minutes).
- (b) Network bandwidth (Mbit/Sec).
- (c) Number of native Processes.

- (d) Status of native Processes (Owner, CPU, Disk, RAM and Special hardware usage).
- (e) Number of alien Processes.
- (f) Status of alien Processes (Owner, CPU, Disk, RAM and Special hardware usage).
- (g) Free available disk space of those Disk IDs.
- (h) Total free RAM.
- (i) Special Hardware status.” *Specification, page 6, lines 1–16.*

That is, the self assessment function of a station serves to determine the status of the hardware resources of the station.

Further, “[t]he system security module 16 guards a station [and] can prevent answering malicious requirements and unreasonable task execution requirements. ... Normally, this is done on a trust basis, as defined by a trust list held in and for each station. The trust list is a list of ... other stations which the station concerned will transmit broadcast requests to and will be prepared to consider answering broadcast requests from.” *Specification, page 6, lines 21–28.*

(emphasis added)

Addressing the requirements described above, embodiments of the present invention provide for self assessment, including the status of hardware resources, and for trust-based security. For example, the station for a network apparatus of claim 1, as presented herein, includes at least:

A station for a network apparatus, said network apparatus comprising said station and a plurality of other stations, all interconnected in a network by a communication link, said station comprising:

a network connection;

a self assessment module operable to determine a current status of said station,

wherein said current status is a measure of available hardware resources of said station, and

wherein said current status includes a determination of a dynamic status for said station based on current usage of said hardware resources of said station; and

a trust list that includes a station identifier for each other station of said plurality of other stations which is designated as trusted to perform tasks for said station.

(emphasis added)

Accordingly, in one aspect of claim 1, a station for a network apparatus includes at least a network connection; a self assessment module operable to determine a current status of the station, wherein the current status is a measure of available hardware resources of the station, and wherein the current status includes a determination of a dynamic status for the station based on current usage of the hardware resources of the station; and a trust list that includes a station identifier for each other station of the plurality of other stations which is designated as trusted to perform tasks for the station. (emphasis added)

By contrast, Hild teaches advertising onto a network, from time to time, service information known to the transmitting device. *See Hild, Col. 8, lines 21–35 and 47–48.* Citations provided in the Office Action provide that information is represented by meta data, which “refers to information about protocols and /or services, as opposed to ‘user data,’ which may be useful in applications. [M]eta data mainly refers to services (e.g., provided in the form of a list of services).” *Hild, Col. 10, lines 34–37.* Moreover, Hild equates “services” with “resources.” (*see Hild, Col. 11, line 13*) However, Hild does not teach or suggest a self assessment module operable to determine a current status of the station, wherein the current status is a measure of available hardware resources of the station, and wherein the current status includes a determination of a dynamic status for the station based on current usage of the hardware resources of the station.

Further, Segarra was merely cited for teaching “a[n] originator broadcasting of service requests to [a] plurality of network nodes”. Segarra fails to teach or suggest a self assessment module operable to determine a current status of the station, wherein the current status is a measure of available hardware resources of the station, and wherein the current status includes a determination of a dynamic status for the station based on current usage of the hardware resources of the station. Therefore, Hild and Segarra, individually or in combination, fail to teach or suggest all the limitations of claim 1.

Based on the foregoing discussion, claim 1 should be allowable over Hild and Segarra. Since claim 14, as amended herein, closely parallel, and recites substantially similar limitations as recited in, claim 1, claim 14 should also be allowable over Hild and Segarra.. Further, since claims 2-4, 6-7, 9-13, and 15-17 depend from one of claims 1 and 14, claims 2-4, 6-7, 9-13, and 15-17 should also be allowable over Hild and Segarra. Claims 5 and 8 were addressed in the body of Section 6 of the Office Action. However, since claims 5 and 8 depend from claim 1, claims 5 and 8 should also be allowable over Hild and Segarra. Claims 18 and 19 have been canceled.

Accordingly, it is submitted that the rejection of claims 1–4, 6–7 and 9–19 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

Conclusion

In view of the foregoing, entry of this amendment, and the allowance of this application with claims 1-17 are respectfully solicited.

In regard to the claims amended herein and throughout the prosecution of this application, it is submitted that these claims, as originally presented, are patentably distinct over the prior art of record, and that these claims were in full compliance with the requirements of 35 U.S.C. §112. Changes that have been made to these claims were not made for the purpose of patentability within the meaning of 35 U.S.C. §§101, 102, 103 or 112. Rather, these changes were made simply for clarification and to round out the scope of protection to which Applicant is entitled.

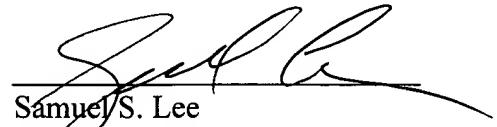
In the event that additional cooperation in this case may be helpful to complete its prosecution, the Examiner is cordially invited to contact Applicant's representative at the telephone number written below.

The Commissioner is hereby authorized to charge any insufficient fees or credit any overpayment associated with the above-identified application to Deposit Account 50-0320.

Respectfully submitted,

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